children, but this has been doubted by Berzelius. Proust observes that it may be separated from urine in which it exists, either by evaporation and crystallization, or by distillation.

The bottle of urine furnished me by Dr. Perry, was closely corked and set aside in the laboratory, until I should have leisure to examine it. Other engagements precluded the possibility of making an analysis of it for three weeks, at the end of which time, the bottle was taken, and with the intention of removing a portion for analysis, the cork was started, when it was driven forcibly out by expansion of gas, and rapid effervescence of the urine caused a considerable quantity to escape from the bottle.

The gas being examined by lime water, was found to be carbonic acid. The urine had lost all sweetness to taste, and when a portion was evaporated, no sugar could be obtained. Alcohol was present, as was proved by its odour, and by distillation.

Hence, it appears, that the urine had undergone vinous fermentation; the sugar having changed into alcohol by this process. I thought this a favourable opportunity to ascertain if urea existed in this urine, as the sugar had disappeared by fermentation, and the alcohol produced, had preserved the animal principles from decomposition. For this purpose, I took an ounce of the urine and evaporated it to the consistence of syrup, and then added diluted nitric acid equal in bulk to the syrup. The greater part of the liquid, after a few hours rest, was found converted into crystals of acidulous nitrate of urea, which were separated by the filter. The fluid which passed the filter, was placed aside in the closet to evaporate spontaneously, and being examined the next day, was found to possess the aromatic odour of *benzoic acid*. In attempting to distil off the fluid in hopes of obtaining the acid the whole was rapidly decomposed by the nitric acid with disengagement of nitrogen and nitrous gas. All the urine now remaining was thrown on the filter to separate the sedimentary matter which it abundantly contained. This sediment was of a grayish colour, and when dry became a compact mass. It is difficultly soluble, requiring 10,000 parts of water for solution. It is more soluble in hot water than in cold, and the water when cooling deposits this matter in powder. It reddens litmus paper feebly. When nitric acid is poured upon the substance in powder, it produces a deep lemon yellow colour, and the sediment is dissolved. When this solution is neutralized by carbonate of soda, a precipitate takes place of a yellow colour. From the above characters, we recognise this substance as *xanthic oxide*, a substance exceedingly rare, having been only once found as a calculus by Dr. Marcet, and never before in diabetic urine. The chemical characters and combinations of this substance are but little known, as its rare occurrence has prevented a sufficient quantity from falling into the hands of any chemist. The filtered urine, when evaporated and treated with nitric acid, gave signs of the presence of xanthic oxide. I had several years since, suspected the presence of benzoic acid in diabetic urine, having perceived the odour of it while analyzing the urine of a diabetic patient, in the Massachusetts General Hospital in 1828. The present case gives countenance to the supposition, that it is of frequent occurrence in this disease, and should always be sought for in analysis of the urine. That the case above related, is one of true diabetes mellitus there can be no doubt, from the phenomena which took place in the urine after it was sent me. I have the additional testimony of Dr. Perry, that the urine had a sweet taste, especially when evaporated to the consistence of syrup.—*Medical Magazine, Aug. 15th,* 1834.

Intussusception with Stercoraceous Vomiting, successfully treated by Inflation. By J. Wood, M. D.—Mr. G. aged thirty-five, a type-founder, of nervous temperament, was suddenly seized on the night of September 17th, with violent pains in the umbilical region: has before suffered two slight attacks of rachialgia. A medical gentleman in the neighbourhood saw him, and prescribed purgatives and hot fomentations. My attendance was requested the next night. He had obtained no relief from the remedies administered during the day; stomach had rejected them. No dejection for three days; frequent retching; little intermission from pain; pulse small and regular. Superficial examination of the abdomen detected no peculiarity. An acquaintance with his previous attacks led to the presumption that the present was painter's colic : he was, therefore, directed to take a pill containing two grains of opium, and one drop of croton oil every two hours till relieved; and to have an enema every four hours, and bags of hot sand to the abdomen.

Sept. 19*th*. Has taken all the pills : less pain through night, but since daybreak paroxysms have returned with greater force and frequency, accompanied by violent tormina and tenesmus; dry retching, especially after taking drink; hiccup; slight but general tenderness of abdomen; pulse irregular, irritated; no fæcal evacuation, but discharged in the course of the day a little bloody mucus, and vomited, towards night, a large quantity of green bile mixed with feculent matter. After a careful examination, the precise point of obstruction was ascertained. At first, only an unusual fullness and firmness in right iliac region could be discovered : but the hand lying upon the spot, a paroxysm of pain occurred and an elongated tumour was felt to rise with an erectile motion : immediately there followed a gurgling, rumbling noise, and a rush of fluid downwards against the point of obstruction. After two or three surges against the tumour, the fluid receded towards the stomach; but again returned with renewed violence, until the spasm subsiding, it passed upwards, the bowels taking on an inverted action. The treatment adopted was copious bleeding, the administration of purgatives, as calomel, infusion of senna, castor oil, enemata of tobacco infusion, hot anodyne fomentations, and at night large doses of opium.

20*th*. Aggravation of all the symptoms. In the afternoon Dr. Morril saw him, and after a careful examination of the case and an acquaintance with the treatment pursued, he agreed in opinion that there were no grounds for hope. As a last resource, however, he proposed inflation of the bowels with atmospheric air.* Placing the patient on his right side, the pipe of a pair of bellows was introduced into the rectum, and inflation cautiously begun. This succeeded but partially, owing to the imperfection of the instrument; yet to our surprise, he proclaimed himself much easier, and was irresistibly driven to the commode, where he passed a large quantity of air and a gill of very fœtid, bloody water. A more perfect pair of bellows having been obtained, the tube was again inserted, and inflation employed till the abdomen became tense. He had no recurrence of violent pain after first inflation. Directions were given him to remain quiet in bed, and resist the disposition to evacuate the bowels; to take one drop of croton oil every two hours, and at the end of four hours an enema of mucilaginous fluid. He was visited six hours afterwards; had had no return of pain since inflation : within last hour two copious dejections.

21*st*. Had seven dejections since last visit; quiet sleep for three hours; somewhat feverish, thirsty; countenance anxious; pulse 125, small; tongue red, dry in centre. Full vesication from blister applied yesterday. Pretty severe enteritis followed, which yielded to the usual remedies in the course of fourteen days.

The result of this case was extremely gratifying. With regard to the treatment finally employed, we had no very sanguine anticipations of success; yet it must be admitted, that there is more philosophy in it than in many other plans adopted to lessen the ills of life. Of the numerous enemata administered in the forty-eight hours preceding the inflation, but a small quantity was retained, and that but momentarily. The use of them was persisted in with the hope of effecting mechanically the dilatation of the gut. In similar cases, the enemata cannot be thrown up to any amount : what is injected immedately returns. The effect is totally different when air is used. Its levity, its freedom from all irritating qualities, its elasticity and expansibility, give it a decided preference over the enemeta. The nature of the difficulty, also warrants the view of its utility. The tendency of the peristaltic motion and of the ingesta, is from above, downwards; most cases of intussusception, therefore, are *progressive*, few *retrograde*. If then, we can dilate the stricture, the invaginated portion will escape from below upwards, and thus will be restored to its original situation. If the above explanation be correct, what remedy can compete with inflation? It certainly merits a trial, and is earnestly recommended to the consideration of the profession.—*Boston Medical and Surgical Journal and Med. Mag. Dec.* 15*th*, 1834.

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* Vide Med. Mag. Vol II. page 530.

On the Plant which furnishes the Jalap. By R. E. Griffith, M. D.—The first author who speaks of jalap in a definite manner, is Caspar Bauhin, in 1609, (*Pinax.* 298. *Prod. Theat. bot.* 135,) under the name of *Bryonia mechoacana nigricans.* But succeeding botanists appear to have been in a state of great uncertainty as to the plant furnishing this root. Ray, (*Hist. Plant.* 724,) refers it to the genus convolvulus under the name of C *Americanus jalapium dictus*; in this he was followed by Pluckenett, (*Phytog. Tab.* f. 1.)

Some time afterwards, Tournefort, misled by Plumier and Lignon, who stated that they had seen the plant in America, attributed the jalap to a species of *Mirabilis*, (*Inst. Rei. Herb.* 130,) and this erroneous idea was also adopted by Lemery in the second edition of his great work on drugs, where he figures a mirabilis as the true jalap plant.

Notwithstanding the weight of an opinion from such a source, Miller, (*Gard. Dict.*) and Sloane, (*Hist. Jamaica,*) again referred the jalap to convolvulus, and their statement was confirmed by Houston, who brought the plant from South America and showed it to Jussieu, who decided that it belonged to that genus.

Linnæus, however, in the first edition of his materia medica still adhered to the opinion of Tournefort, and attributes it to the *Mirabilis longiflora.* Some years afterwards he recognised his error and placed it in the genus convolvulus, with the following specific characters:

C. *jalapa, foliis difformibus cordatis, angulatis, oblongis, lanceolatisque, pedunculis unifloris, seminibus lanigeris.*

But the subject still remained in uncertainty. Murray, (App. Med. i. 216,) on the authority of Thiery de Menonville, started the idea that there might be more than one species of convolvulus, furnishing the official jalap. The latter writer stated that he found a species near Vera Cruz, which he affirmed to be the true jalap, and the roots of which weighed twenty-five pounds. He drew up a description of this plant which he transmitted to Jussieu and Desfontaines, this latter botanist, on comparing the description of De Menonville with that of the *Ipomœa macrorhiza* of Michaux, specimens of which were growing in the Garden of Plants at Paris, was convinced that they were identical; hence when Michaux discovered the latter in Florida and sent the seeds to Paris, Desfontaines published a memoir on jalap, (*Ann. du Mus.* ii. 220,) in which he ascribed this drug to the I. *microrhiza*, and gave the C. *jalapa* of all preceding botanists as synonymous. The accuracy of this was first doubted by Mr. Nuttall, (*Gen. N. Am. Pl.* i. 123,) on the authority of Dr. Baldwin, who from actual experiment found that the I. *macrorhiza* was inert, and better fitted for an esculent than for a medicine.

In 1827, Dr. Coxe having received roots of the true jalap from South America, became convinced that the descriptions of former authors were erroneous, and in 1830 published a full account of it in the American Journal of Medical Sciences. In 1829 also, Mr. Ledanois sent a short description of the same plant to Mr. Chevallier at Paris, thus confirming the discovery of Dr. Coxe.

The description given by Mr. Ledanois differs in a few unimportant particulars from that by Dr. Coxe, but it is evident that they both were drawn up from the same species,

Thus Mr. Ledanois states that the leaves are smooth, without prominent veins,